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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,472	07/08/2003	Keith A. McCrea	16510-017	9617

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EXAMINER
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RAEVIS, ROBERT R

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/616,472

Applicant(s)

MCCREA, KEITH A.

Examiner

Robert R. Raevis

Art Unit

2856



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-16 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Claims 1,2,4,6,7,14,15,8,9,11,12,13,16,10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirayama, in view of White et al or Tait, and further in view of either Nakamura, Izawa et al or Nonma et al.

Hirayama teaches a device, including: non-contact sensor 100 that measures a "surface condition" (col. 1, line 13) or a roller related to printing. Hirayama teaches moving the sensor "along the axial direction" (col. 9, line 37)/ "along the central axis" (col. 9, line 52).

Hirayama does not state how the sensor is moved along the axial direction, does not collect data, and does not refer to the roller 10 as a "work roll".

As to claims 1,2,14,8, it would have been obvious to use a rail to move Hirayama's sensor along the axial direction because either White et al teach use of motorized threaded rail to effectively drive a sensor along a roller, or Tait teaches use of a rail 20 to effectively support a sensor as it is displaced across a roller of interest. In addition, use of a means to collect data is suggested by either Tait's recording 42 teaching for data obtained by scanning, providing for a record to be subsequently studied, or White's mass data storage unit 62, that provides for a record to be subsequently studied. In addition, Hirayama's roller 10 may be called a work roller, as either (1) Honma et al (para 0010) express that rollers in the printing art provide "work", (2) Izawa et al (col. 5, lines 36-43) express that rollers in the printing industry express that rollers provide work, or (3) Nakamura teaches (col. 10, last 5 lines) that rollers in the printing industry cooperatively work. (Note that the phrase "work roller" in the claims

Art Unit: 2856

do not provide for any structural limitations that distinguish over any rollers that carry out work. In addition, Applicant's written specification simply states that his work rollers are "used in the manufacture of sheet steel and other sheet metal products", and that disclosed use is not employed in the structure of the claimed apparatus.)

As to claims 4,9, note that the recorder 42 displays, as well as White's display 64, allowing for an operator to immediately recognize results.

As to claim 10, Hirayama's measurements are indicative of a "test of the surface roughness" (col. 2, line 37).

As to claims 6, 7, the axis of the probe must accurately follow the axis of the roll for correlation of results of sensor measurement with location of those measurements.

As to claims 15,16, glossimeters include those of analog nature.

As to claims 11 and 12, measurements may be quickly made to provide for averaging, allowing for reduced error in measurement.

As to claims 13,14, note "while the developing roller is rotated" (col. 9, lines 49-50).

Claims 1 to 4,6-9,11,12,13,14,15,16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popovic et al, in view of White et al or Tait, and further in view of either Nakamura, Izawa et al or Nonma et al.

Popovic et al teach (Fig. 1) a device, including: a capacitive probe 18 mounted on a floating device 29, and data acquisition computer 22.

Art Unit: 2856

Popovic does not clearly describe the assembly (col. 9, lines 54-56) that moves the probe, and does not call the roller a work roller.

As to claims 1,2,3,8,13,14, it would have been obvious to use a rail to move Popovic's sensor along the axial direction to provide for the "new scan line" (col. 9, line 57) because either White et al teach use of motorized threaded rail to effectively drive a sensor along a roller, or Tait teaches use of a rail 20 to effectively support a sensor as it is displaced across a roller of interest. In addition, Popovic's roller may be called a work roller, as either (1) Honma et al (para 0010) express that rollers in the printing art provide "work", (2) Izawa et al (col. 5, lines 36-43) express that rollers in the printing industry express that rollers provide work, or (3) Nakamura teaches (col. 10, last 5 lines) that rollers in the printing industry cooperatively work. (Note that the phrase "work roller" in the claims do not provide for any structural limitations that distinguish over any rollers that carry out work. In addition, Applicant's written specification simply states that his work rollers are "used in the manufacture of sheet steel and other sheet metal products", and that disclosed use is not employed in the structure of the claimed apparatus.)

As to claims 4, 9, note that the recorder 42 displays, as well as White's display 64, allowing for an operator to immediately recognize results.

As to claims 6,7, the axis of the probe must follow the axis of the roll for correlation of results of sensor measurement with location of those measurements.

As to claims 11 and 12, measurements may be quickly made to provide for averaging, allowing for reduced error in measurement.

Art Unit: 2856

As to claims 15,16, Popovic's capacitive sensor is as analog as Applicants's sensor of claim 3.

Claims 1,2,4,14,15,8,9,10,13,14,15,16 are rejected under 35 U.S.C. 102(b) as being anticipated by Tuck.

Tuck teaches a non-contact device, including: optical sensor 70 to measure the diameter of a pilger mill mandrell; guide rails 67a,67b; motor to move the sensor parallel to the mandrell; and "computer memory" (col. 4, line 58) to store measurements. The mandrell is used for cold rolling (see col. 1, lines 7-12), and thus is a work roll. Data must be displayed for use. Tuck measures diameter.

As to claim 15, analog instrumentation is applied with laser/optics sensor.

Claims 6,7,11,12 are rejected under 35 U.S.C. 102(b) as being anticipated by Tuck.

As to claims 6,7,11,12, computer driven sensor is suggestive of many measurements to provide for accurate measures of ovality.

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to Remarks:

Art Unit: 2856

As to p. 7, last paragraph; Hirayama's teaching of moving the probe is suggestive of any known probe moving system.

As to p. 9, third paragraph; Popovic a aerodynamically floatable contact device does require a guide, otherwise it would fall to the floor.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raevis whose telephone number is 571-272-2204. The examiner can normally be reached on Monday to Friday from 7am to 4pm. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2856

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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